

California Influenza and Respiratory Disease Surveillance for Week 46 (November 14-20, 2010) and Week 47 (November 21-27, 2010)

For Weeks 46 and 47, overall influenza activity in California remained “sporadic.”*

Influenza Highlights (Weeks 46-47)

- In Weeks 46 and 47 combined, the California Department of Public Health (CDPH) received two reports of laboratory-confirmed influenza patients who were admitted to the ICU and tested positive for influenza B. Since Week 40, the start of this reporting year, four non-fatal cases have been reported; two have been in pediatric patients.
- Reports of influenza-like illness (ILI) from sentinel providers saw an overall increase in Weeks 46 and 47 compared to Week 45. The ILI activity in California for both weeks remained “minimal.”
- The percentage of Kaiser Permanente hospitalizations for pneumonia and influenza (P&I) increased in both northern and southern California during this reporting period.
- Among 101 specimens tested by PCR statewide by the Respiratory Laboratory Network (RLN), nine were positive for influenza, including influenza A/H3 (2), A/2009 H1N1 (1), and B (6). The majority of the positive specimens were submitted from southern California.
- The proportion of specimens that were positive for respiratory syncytial virus (RSV) continued to increase among sentinel laboratories (9.5% and 11.1% in Weeks 46 and 47 respectively, compared to 8.2% in Week 45).

A. Laboratory-confirmed case reports

During Week 47 (November 21-27, 2010), CDPH received two reports of severe (defined as ICU admission or death) laboratory-confirmed influenza B in children from southern California. To date, a total of four severe cases have been reported since October 1st; including 3 confirmed as influenza B and one confirmed as influenza A/H3. The age range of cases has been 14-55 years; three were associated with secondary bacterial infections. No influenza-associated fatalities have been reported.

B. Syndromic Surveillance

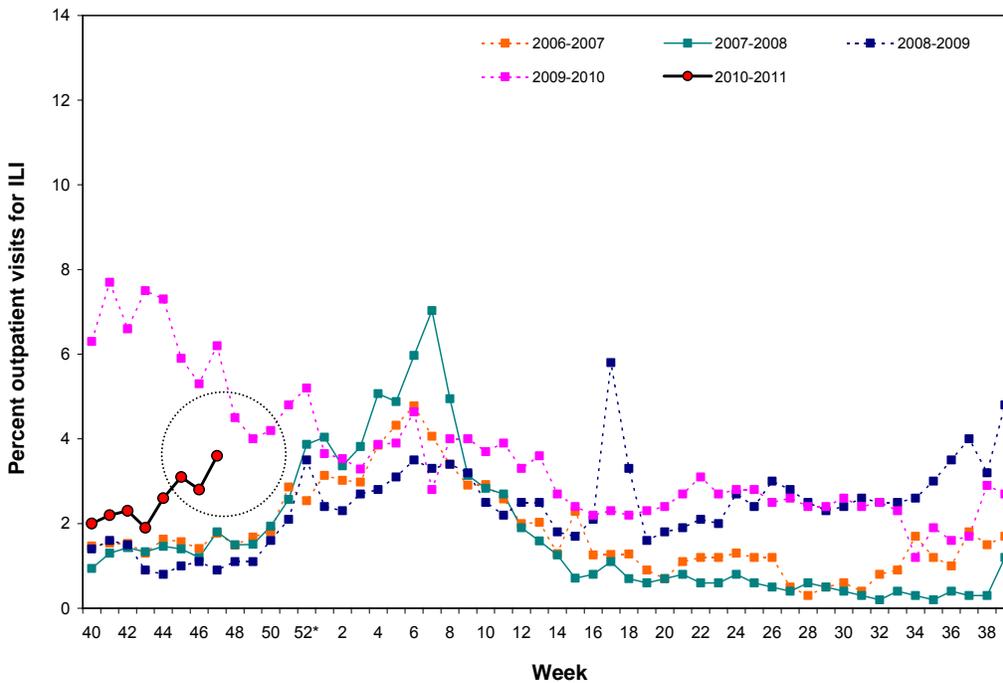
CDC Influenza Sentinel Providers

Sentinel providers report the number of outpatient visits for ILI and the total number of visits per week. These data are reported weekly as a percentage of total visits due to ILI. The ILI case definition is fever $\geq 100^{\circ}\text{F}$ (37.8°C), oral or equivalent, AND cough and/or sore throat (in the absence of a known cause other than influenza).

ILI decreased slightly during Week 46 (November 14-20, 2010) compared to the previous week, but increased again in Week 47 (November 21-27, 2010). A total of 102 sentinel providers have reported Week 46 data; 80 sentinel providers have reported Week 47 data.

*Sporadic is defined by the Centers for Disease Control and Prevention (CDC) as “small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of influenza-like-illness (ILI)”

Figure 1. California Sentinel Providers – Influenza-Like Illness Visits, 2006-2011



C. Laboratory Update

1. Respiratory Laboratory Network (RLN) Influenza PCR Surveillance Results

The Respiratory Laboratory Network is composed of 23 local public health laboratories that offer PCR testing for influenza A and B and testing using the R-mix shell vial culture system to identify five other common respiratory viruses (RSV, adenovirus, and parainfluenza virus type 1-3).

During Week 46 (November 14-20, 2010) and Week 47 (November 21-27, 2010), of 101 specimens tested by the RLN, nine (8.9%) were positive for influenza, including influenza A/H3 (2), A/2009 H1N1 (1), and B (6). The influenza A/2009 H1N1 specimen was from central California, while the remaining eight specimens were from southern California.

Table 1. Respiratory Laboratory Network (RLN) Influenza PCR Surveillance Results from Selected Laboratories^a, Week 46 (November 14-20, 2010) and Week 47 (November 21-27, 2010)

	Total RLN ^a	Northern CA	Central CA	Southern CA
	No. (%)	No. (%)	No. (%)	No. (%)
Number of specimens tested by PCR	101	18	14	69
Influenza A ^b	3 (3.0)	0 (0.0)	1 (7.1)	2 (2.9)
A (H1) ^c	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
A (H3) ^c	2 (66.7)	0 (0.0)	0 (0.0)	2 (100.0)
A (2009 H1N1) ^c	1 (33.3)	0 (0.0)	1 (100.0)	0 (0.0)
Influenza B ^b	6 (5.9)	0 (0.0)	0 (0.0)	6 (8.7)
Number of specimens tested by R-mix	40	0	24	16
RSV ^d	1 (2.5)	0 (0.0)	1 (4.2)	0 (0.0)
Other respiratory viruses ^{d,e}	3 (7.5)	0 (0.0)	2 (8.3)	1 (6.3)

^a RLN labs reporting Week 46 and/or Week 47 data, by region:

Northern CA: Contra Costa, Placer, Sacramento, San Francisco, San Mateo, Santa Clara, Shasta

Central CA: Fresno, San Joaquin, Tulare

Southern CA: Long Beach, Los Angeles, Orange, Riverside, San Diego, San Luis Obispo

^b Percent of total specimens tested for influenza by PCR

^c Percent of influenza A positives

^d Percent of total specimens tested by R-mix

^e Adenovirus (1), parainfluenza type 2 (2)

2. Sentinel Laboratory Positive Results Data

Sentinel laboratories are a network of clinical, commercial, academic, and hospital laboratories located throughout California that provide weekly data on the number of laboratory-confirmed influenza and other respiratory virus detections and isolations.

Table 2 shows positive influenza and RSV results reported from sentinel laboratories during the past two weeks (November 14-27, 2010). Of the 1,501 specimens tested for influenza, 19 (1.3%) were positive for influenza A and 11 (0.7%) were positive for influenza B. A total of 141 (10.3%) specimens were positive for RSV.

Table 2. Influenza and other respiratory virus detections from Sentinel Laboratories, November 14-27, 2010

	Sentinel Laboratories	
	Number	58 sites reporting
Weeks 46-47	Influenza A	19 (1.3%) ^a Total tested Weeks 46-47: 1501
	Influenza B	11 (0.7%) ^b Total tested Weeks 46-47: 1501
	RSV	141 (10.3%) ^c Total tested Weeks 46-47: 1373

Total number of positive lab results reported, by local health jurisdiction of patient's residence and/or site location:

^a Alameda (2), Imperial (5), Los Angeles (3), San Francisco (1), San Mateo (5), Santa Clara (3)

^b Alameda (2), Imperial (1), Long Beach (3), Los Angeles (1), Riverside (1), San Diego (1), Santa Clara (2)

^c Alameda (30), Contra Costa (4), Fresno (5), Imperial (5), Kings (1), Long Beach (9), Los Angeles (9), Marin (2), Merced (3), Monterey (1), Placer (1), Riverside (5), San Francisco (16), Sacramento (2), San Diego (1), San Joaquin (3), San Mateo (12), Santa Clara (19), Santa Cruz (1), Solano (3), Sonoma (4), Stanislaus (5)

Figures 2 and 3 summarize the combined laboratory data from both the RLN and the sentinel laboratories. Figure 2 shows that detections remained at a low level through Week 46 (November 14-20, 2010), and Week 47 (November 21-27, 2010). Of the samples tested during Week 46, 1.4% were influenza A and 1.6% were influenza B. Of the samples tested during Week 47, 1.4% were influenza A and 0.4% were influenza B. Figure 3 shows that RSV continued to increase during Weeks 46 and 47, continuing an upward trend that started in Week 43 (October 24-30, 2010).

Figure 2. Influenza detections at Sentinel Laboratories/Respiratory Laboratory Network, 2007-2011

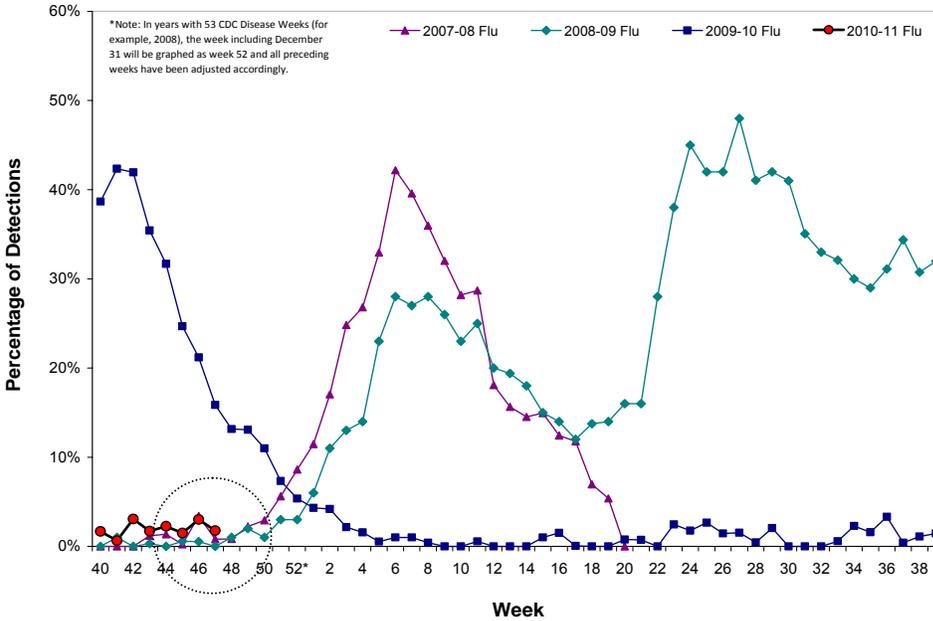


Figure 3. RSV detections at Sentinel Laboratories/Respiratory Laboratory Network, 2006-2011

